#21 Appeal Brief 3/30/04

OIPE
MAR 19 2004
PATENT & TRADEMARK OFFICE
JC42

I hereby certify that this correspondence is being deposited with the United States Postal Service first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on 15 March 2004
QUINE INTELLECTUAL PROPERTY LAW GROUP, P.C.
By:

Atty Docket No: 512.0004IOUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

REYNOLDS

Application No.: 09/471,101

Filed: 12/21/1999

For: METHOD AND APPARATUS FOR A REMOTELY SWITCHABLE POWER SUPPLY

Examiner: HOLLOWAY III, EDWIN C

Art Unit: 2635

APPEAL BRIEF

RECEIVED
MAR 2 4 2004
Technology Center 2600

Commissioner for Patents
Alexandria, VA 22313

Dear Sir:

APPEAL BRIEF

Real Party in Interest.

The real party in interest in the present appeal is Cyber Switching, Inc., the assignee of the above-referenced application.

Related Appeals and Interferences.

Appellants, Appellants' Attorney, and the assignee of the present application are unaware of any appeals or interferences that will directly affect, be directly affected by, or have a bearing on, the Board's decision in the present appeal, with the exception of an appeal in co-pending Application No.: 09/309,321, filed 11 May 1999.

Status of Claims.

On 14 October 2003, Appellants appealed from the final rejection of claims 1-3, 5-9, 13, 14, 16, 17, 21-31, and 33-37. Accordingly, all of the pending claims are rejected and on appeal.

03/22/2004 CNGUYEN 00000128 500893 09471101
02 FC:2402 165.00 DA

Status of Amendments.

The claims were finally amended on 2 April 2003 in response to the Office Action dated 2 December 2002. Accordingly, the appealed claims are the claims as amended in the 2 April 2003 amendment.

Summary of Invention.

Appellants' invention involves methods and systems for controlling power to a number of network devices in a standard networked information setting. In the claimed invention, multiple power outlets can be individually and independently controlled in a network rack unit using a control signal carried on a separate line of a power supply. As discussed in the specification, realization of the invention required careful configuration of power control circuitry to allow the device to operate without causing interference to communication signals. The invention is a departure from prior rack-mounted systems known in that it provides multiple, independently controlled power circuits, rather than circuits that are connected to one another to provide staggered power-on or that are connected by a single microcontroller and require a command code to be interpreted indicated which power supply is being controlled.

The appealed claims are set forth in Appendix A.

Issues

The original application was filed 21 December 1999. The final amendment entered in this case was mailed 2 April 2003.

Grouping of Claims.

The pending claims do not stand or fall together.

Argument.

I. The rejection of claims for obviousness is improper.

A. The rejection.

Claims 1-3, 5-9, 13, 14, 16, 17, 21-31, and 33-37. stand rejected for obviousness over the combinations of CHENG '174 or PULIZZI '103 in combination with EMM 96 and LORD '806. (Final Office Action dated 10 June 2003, page 3). However, the rejections rest on a incorrect interpretation of what is actually shown in the asserted references, particularly in LORD. Furthermore, the only basis for combining suggested by the Examiner is to achieve the exact advantages claimed by application. The Examiner has never shown where the prior art suggests that these particular advantages are desirable or ever suggests the claimed invention as a means of achieving these advantages.

In the Final Office Action (dated 10 June 2003), pages 4-5, the Examiner states:

> "It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified CHENG '174 or PULIZZI to include the housing limitations of EEM 96 because Cheng and PULIZZI refer to rack mount or stacked units, because EEM 96 discloses the claimed rack mount housing for analogous art remote controlled power supply including devices by PULIZZI and because it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse 86 USPQ 70.'

In the Final Office Action (dated 10 June 2003), page 5, the Examiner states:

> "It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in the combination applied above power control signals communicated on a pin or wire of standard network socket(s) or cable(s) such as standard RS-242C connector or cable, while other pins or wires are passed through as disclosed in Lord and to have included circuitry turned on or off directly in response to the high/low state of a control signal in view of Lord disclosing power control relay 220 in order to allow power control of network devices with a simple and flexible circuitry.
>
> The inclusion of multiple pairs of control sockets associated with one or more corresponding independently controlled power supply sockets would have been obvious in view of the various configurations shown in EEM 96

with multiple remote I/O connections associated with multiple switched power, because plural power supply sockets and corresponding network sockets was admitted as prior art on page 1 line 23- page 2 line 2 of applicant's specification and because plurality of part for multiplied effect is well known to be obvious. RJ-45 would have been obvious in view of the Lord disclosing use of any standard data communications interface and EEM showing RJ-45 as standard data communication interface on rack-mounted components."

B. LORD '806 (U.S. 5,198,806) does not show the operational features of the invention as asserted by the Examiner

The patent to LORD discusses a remote controller for a home computer system accessed over a telephone line and a conventional external modem 40. The modem receives, over a telephone line or "private network" 45, a carrier encoded data call and determines if a valid carrier is present. If it is, the modem generates a carrier detect signal which is connected through controller 10 to a relay to activate a power connection. Control software is used to make the invention overall operate, in particular initiate turning off power if a user is not authorized. Col. 6, line 53 - col. 7 line 35 described operation of one part of the Lord device, with reference to both Figs. 1 and 3. In Lord, the power control circuit is not connected to a network or external communication signal, but is connected to a signal decoded and generated by the local modem.

Lord does show a connection between a local modem and a local computer using a local interconnect cable to turn on (though not off) the power locally to the computer. The control relay for doing this is similar in operation and activation to the control relay shown in the specification of the present invention and recited in dependent claims 5 and 17.

However, the Examiner is relying on a modification to Lord (using a signal received directly over a communication channel) that would make Lord unsuitable for its purpose of providing secure access at a home over a telephone dial-up modem. Lord DOES NOT teach any direct operative connection between a control signal line carried over a network and an ON/OFF mechanism. In

Lord, no such signal is communicated. A telephone call is made. A modem determines if there is a carrier present on an incoming telephone call. Only after decoding the incoming communication signal and determining that there is a valid carrier present, does the modem then assert, locally, a "carrier detect." This particular "carrier detect" signal was not communicated over the Lord telephone line or network 45, it was, as discussed in Lord, generated locally by the local modem upon the modem detecting a carrier signal. Thus, there is no "carrier detect" line or data signal or wire in Lord telephone line or network 45.

In response to Applicant's previous arguments, the Examiner stated "Lord clearly discloses in figs. 3 and 6 and cols. 5-7 that the power is switched in response to only a single line of a standard network cable as claimed by applicant."

However, Lord does not show what is asserted by the Examiner. Lord shows a modem that generates a carrier detect signal locally from a telephone or private network 45, and then uses that locally generated signal through a local "interconnect" cable to turn on a relay to power a local personal computer. (Very clearly illustrated in Fig. 1.) Lord does not suggest how its secure dial-up modem scheme could be used in a network environment or be modified or combined as urged by the Examiner to achieve the claimed invention. "Interconnect" or "interface" cable 60 are not network cables, as asserted by the Examiner, but are in fact, local serial "interconnect" cables as stated in the Lord patent. There is no direct control of a power outlet by a network signal, as recited in the claims, but instead Lord teaches that a signal is first received at a local modem device, decoded, and then a carrier detect signal can be used to turn on a power outlet. There is no discussion in Lord of turning off a power supply in response to a network signal.

The Examiner makes a number of assertions regarding Lord on page 6 of the Office Action, which are not supported by Lord or by terms used as commonly understood in the art. For example, the Examiner asserts: "The argument that the modem 40 and/or computer 25 of Lord provide decoding is not persuasive because the modem and computer are separate network devices corresponding to the network controller in the form of a router generating power control signals on page 3 lines 9-17 of applicant's disclosure." (emphasis added.) Nothing in Lord or the art supports this interpretation. Lord clear describes and illustrates a telephone connection to a local modem to a local personal computer. The examiner asserts that a local dial-up modem connected by a local serial interconnect cable to a local computer is equivalent to network connection using a router. There is no support for this equivalency in Lord, in any cited reference or in the art generally. Lord in fact indicates that a network connection is analogous to telephone line 45, in other words something other than a local, direct serial connection. Thus, the Examiner assertion that the local connection of modem 40 to local computer 150 is equivalent to a network connection is contradicted by the term both as commonly understood in the art and as used in Lord. Lord, itself, shows that its relay device in 12 in not controlled directly by any signal carried on its network 45, it is turned on by a signal that is generated by modem 40 after decoding what is received from the network. Lord makes this very explicit, in fact:

> ...The connector 100 on invention 10, acts as an interconnect between the modem 40 and the serial port of the local computer 25 via connector 65. All signals from the modem 40 and computer 25 are passed via this connection which to the electronical communication transmitted so that the invention 10 appears to be electronically transparent. One particular signal, **namely the carrier detect from modem 40 which** is sensed by a conventional sensitive electromechanical relay 220 (typical device Stancor Part No. MS64-931 manufactured by Hamilton Standard Controls, 131 Godfrey, St. Logansport, Ind.) via rectifying diode 225 (typically a 1N914 or equivalent) which is carried by interconnecting cable 60 **and generated by modem 40 in response to a signal carried via the interconnect means 45** which is

> placed thereupon from remote computer or terminal 30 by local modem 35 ...The carrier detect signal is generated by the modem 40 when the carrier from a remote modem 35 is detected and found to be compatible for the communication exchange required. FIG. 5 depicts another method of packaging the circuity where by only the necessary communication signals are tapped off a cable adapter 400 which is of RS232-C or equivalent near the modem or the computer's serial port then carried back to the power switching enclosure. (Col. 6-7)

The Examiner has provided no evidence that a local interconnect cable connecting a dial-up modem to its local computer as understood when Lord was filed is equivalent to a standard network connection that is addressable from a far distant router over standard network cables.

The Examiner attempts to overcome the failure to show any evidence for reading the different scheme of the present invention as equivalent by stating:

> "Lord clearly discloses in figs. 3 and 6 and cols. 5-7 that the power is switched in response to only a single line of a standard network cable as claimed by the applicant. The argument that the modem 40 and/or computer 25 of Lord provide decoding is not persuasive because the modem and computer are separate network devices corresponding to the network controller in the form of a router generating power control signals on page 3 lines 9-017 of applicant's disclosure. The argument that the power switching unit of Lord is directly connected to modem and not a network is not persuasive because the cables 60 and 70 connect thru the power switching device interconnects or networks all signal form modem 40 computer 25 in col. 4 lines 35-46." (emphasis added.)

Thus, the Examiner's Lord rejection relies on confounding terms and devices that are understood as different in the art. The Examiner's forced interpretation of Lord that "the modem and computer are separate network devices" is entirely unsupported by any prior art references and requires defining terms contrary to their ordinary use in the art. Lord discloses a "conventional" modem connected to a local personal computer via a local serial interconnect cable. There is no support in the art to referring to such a modem locally connected to a personal computer to provide dial-up services as "a separate network device" from the computer to which it is locally connected.

While Lord suggests that the telephone system shown in Fig. 1 could also be understood as a private network, Lord never suggests the interpretation urged by the Examiner. The Examiner attempts to forcible equate "interconnects" as "networks," however networks is understood in the art as a specific form of interconnecting specific types of devices. There is no support in the art for interpreting a local, unshared connection between a dial-up modem and a personal computer as "networking."

C. The EEM 96 catalog devices operate differently from the claimed invention.

The Examiner stated that: "EEM 96 discloses rack mounted remote controlled power supplies such as MPD-100R...It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Cheng '174 of Pulizzi to include the housing limitations of EEM 96."(Final Office Action dated 10 June 2003, page 4). Thus, the Examiner only relies on EEM 96 for its general housing limitations. Applicant has acknowledged that other network device power controllers have similar housing to specific embodiments of the claimed invention. However, as the catalog pages relied on by the Examiner did not specify in detail operation of any of the devices mentioned, Applicant located additional information about these power supplies referenced by their model number. This additional information demonstrated that none of the cited power supplies use a standard network signal or network connection to control ON/OFF operation. These supplies, instead, require a separate signal to be run to the supplies from a computing device, especially for the purpose of remote operation. In some designs, this control signal, can be passed through the power supply to another power supply only to provide for a number of power supplies to be controlled by the same control signal in a daisy-chain or parallel

fashion. Thus, the EEM 96 power controllers do not operate as recited in the pending claims as appears to have been conceded by the Examiner.

D.. Pulizzi (U.S. 5,923,103) does not operate in a way similar to the claimed invention.

The patent discusses a switched-output controller apparatus with repeater function that includes a microcontroller 18 that can communicate with remote control signals through various sockets e.g. 142, 144, 160, 162. As shown in the figure and discussed in the patent, all eight relays 60-74 are controlled by signals from the microcontroller 18 through a relay driver 24. The patent suggests that there is a command protocol for instructing microcontroller 18 in how to schedule switch operation of the outlets 40-54 through the relays. As shown in the figure and discussed in the patent, there is no direct operative connection between a signal line in any of sockets 142, 144, 160, 162 and the relays. The patent discusses at length that communication to the relays is through an RJ232 connection that allows microcontroller 18 to receive signals FROM A MODEM. (See Col. 2: Lines 46-50 and Col. 8: Lines 34-58.) The patent also discusses at length that if it is desired to control devices located at different locations, an RS485 or RS482 type network connection is made using a different set of RS11 connectors. RS422 and RS485 interfacing is known in the art as using a twisted-pair wire (i.e. 2 wires) for each signal (for example see www.kksystems.com/serdesc1.html). The main difference between RS422 and RS485 is as follows: RS422 has no tri-state capability (its driver is always enabled) and it is therefore usable only in point-to-point communications (although an RS422 device can act as a Master on a 4-wire RS485 system). RS485 has tri-state capability and can therefore be used in multidrop systems. RS422 is full-duplex, i.e. data can flow in both directions simultaneously - and often does. RS422 uses two separate twisted pairs. RS422 is often used simply for extending RS-232 cables. RS485 is half-duplex. It exists in two varieties: 2-wire

(which uses a single twisted pair) and 4-wire (which uses two twisted pairs like RS422). RS485 systems are usually "Master/Slave"; each Slave device has a unique address and it responds only to a correctly addressed message (a "poll") from the Master. A Slave never initiates a dialogue. In a 2-wire system, all devices (including the Master) must have tri-state capability. In fact, it appears that a major advance claimed by Pulizzi is the need for, and presence of, TWO ENTIRELY DIFFERENT AND SEPARATE NETWORK CONNECTIONS for the device to operate (See Abstract, 2d to last sentence and elsewhere throughout.) In particular, Pulizzi discusses that prior systems had just RS232 networks, which were limited to 200 foot operation (Col. 2: line 45 to Col. 3, line 63) and a major advance taught in the patent is use of two separate "in parallel" networks.

Pulizzi teaches away from the invention in that Pulizzi discusses that to control an outlet, communication must first be made to a microcontroller 18 through a modem connection vi RJ11 connectors. This does not teach or suggest using a standard network connection that also carries data or separate lines as recited in the claims. Further Pulizzi discusses that communication with additional controlled outlets must be accomplished through an entirely separate master/slave device type communication through an RS232 or RS485 or RS422 type connection, with a further limitation that the devices cannot be more that 4,000 feet apart.

E.. Cheng (U.S. 5,644,174) does not operate in a way similar to the claimed invention.

The patent discuss a power sequencer, with further provisions for daisy chaining. CONTROL IN is described as a separately generated control signal that can also be used for daisy chaining. There is no illustration or discussion whatsoever anywhere in the reference of a network provided signal or standard network port being used for controlling operation. The CONTROL IN signal is not carried over a network cable that also carries data. The connection of the CONTROL IN signal is

not a standard network connection. Further, the present invention does not discuss or teach daisy chaining, but instead teaches that each device is controlled separately and that any pass through socket is for passing through data signals, not passing through a control daisy-chain signal. Thus, as previously argued there is no discussion or illustration whatsoever in Cheng of the limitations "a first network socket located on a first of said distinguishable surfaces; wherein said first socket is able to receive a standard network cable connector and able to receive a control signal transmitted over a wire of a network cable;" provided in claim 1 or the limitation "wherein a network signal cable can be used to carry a control signal without generating unacceptable interference on said network cable;" of claim 13 or the limitations "a first network socket located on a first surface, said first socket connectable to a standard network cable; a second network socket located on said first surface, said second socket connectable to a standard network cable; a power supply socket located on a second surface; and control circuitry within said housing operatively connected with said first socket and said power supply socket wherein power to said power supply socket may be turned on or off in response to a control signal received over one wire of a standard network cable at said first socket while not interfering with network communication signals on different wires flowing between said first socket and said second socket." of claim 14. While Cheng does appear to discuss a control input socket 204, nothing in Cheng suggests that such a socket is a standard network socket or is capable of carrying standard network data signals that are not interfered with by the control signals carried on the same cable.

F. There is no motivation to combine the references

More specifically, to establish a *prima facie* case of obviousness, the Examiner must demonstrate that (1) all elements of the invention are found in the cited art; (2) the cited art provided motivation to combine or, if necessary, modify these elements to arrive at the claimed invention; and

(3) the cited art revealed that, in making the claimed invention, those of ordinary skill in the art would have a reasonable expectation of success.

The record is devoid of any reason why one skilled in the art would modify the art or make the combinations suggested by the Examiner.

Conclusion

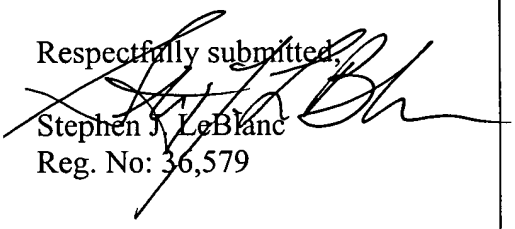
Appellants submit that the Examiner's rejection of claims 1-14 and 16-21 for obviousness is improper. Withdrawal of these rejections by the Examiner or reversal by the Board is respectfully requested.

The Commissioner is authorized to charge the fee under 37 C.F.R. § 1.17(c) and any other required fees, or to credit any overpayments, to Deposit Account No. 50-0893. This paper is submitted in triplicate.

If the Examiner in reviewing this submission does not believe the claims are in condition for allowance, Applicant requests a telephone conference with the undersigned at (510) 769-3508. Dated: March 15, 2004

Quine Intellectual Property Law Group (P.C.)
P.O. BOX 458, Alameda, CA 94501
Tel: 510 337-7871 Fax: 510 337-7877
PTO Customer Number 22798

Respectfully submitted,



Stephen J. LeBlanc
Reg. No: 36,579

Attachments: (1) Appendix A – Appealed Claims for 09/471,101

APPENDIX A

APPEALED CLAIMS FOR 09/471,101

1. (Previously Presented) A controllable power supply comprising:

a mounting having at least one distinguishable surface;

a first network socket located on said distinguishable surface; wherein said first network socket is able to receive a standard network cable connector and able to receive a control signal transmitted on one wire of a network cable also carrying network data communication signals on one or more separate data wires;

a controlled power output socket;

control circuitry operatively connected with said first network socket and said controlled power output socket wherein power to said controlled power output socket can be turned off in response to a signal received on a control signal pin connection of said first network socket; and

a power input connection for connecting to an external power source.

2. (Previously Presented) The device according to claim 1, further comprising:

an indicator light operatively connected to said control circuitry for indicating whether power to said power output socket is on or off.

3. (Previously Presented) The device according to claim 1, wherein said control circuitry comprises a control relay.

5. (Previously Presented) The device according to claim 1 wherein said mounting comprises a top surface, a bottom surface, a front surface, a rear surface, a left surface, and a right surface.

6. (Previously Presented) The device according to claim 5, wherein said first network socket is located on said front surface and said power output socket is located on said rear surface.

7. (Previously Presented) The device according to claim 5, wherein said control socket and said controlled power output socket are located on said rear surface.

8. (Previously Presented) The device according to claim 5 wherein said top surface and said bottom surface are parallel planes between 1.5 and 2.0 inches apart.

9. (Previously Presented) The device according to claim 1 wherein said power supply is mountable on a computer device rack.

13. (Previously Presented) A method for providing a power-cycle reboot in a rack-mounted computing device comprising:

deploying a single rack unit power supply wherein sockets and control circuitry are able to be contained within a housing having a constrained height:

placing a pair of network sockets on a surface of said housing;

placing a controlled power supply outlet on a surface of said housing; and

placing control circuitry within said housing, said control circuitry operatively connected with one signal pin of said pair of network sockets and said power output socket wherein power to said power output socket may be turned on or off in response to a signal on said one signal pin and wherein communication signals on other pins may be passed through said pair of network sockets.

14. (Previously Presented) A method according to claim 13 further comprising:

providing an input supply socket for accepting a detachable power line for connection to an external power source.

16. (Previously Presented) A method according to claim 13 further comprising:

placing said network sockets on a first surface of said housing;

and placing said power output socket on a second surface of said housing.

17. (Previously Presented) A method according to claim 13 further comprising:

placing said network sockets and said output socket on a surface of said housing arranged to align with a computing device for which a power cycle reboot is being provided.

21. (Previously Presented) The device according to claim 1 wherein said controlled power output socket is located on a different distinguishable surface of said mounting.

22. (Previously Presented) A apparatus for providing a plurality of independently controllable power supplies comprising:

two or more independently controlled sets of power outlets;

for each independently controlled set of power outlets, a controllable relay operationally connected between said power outlet set and a power source;

for each independently controlled set of power outlets and each controllable relay; a first network connection socket having a plurality of pin connections, with one of said pin connections used as a control connection for controlling operation of said relay, said control connection not used to carry data;

such that power supplied on one set of said independently controlled sets of power outlets can be turned on or off by applying a control signal to said control connection.

23. (Previously Presented) The device according to claim 22 wherein said apparatus is mounted so that it may be easily installed on a network device rack.

24. (Previously Presented) The device according to claim 22 wherein each of said controlled sets comprise one power outlet.

25. (Previously Presented) The device according to claim 22 wherein each of said controlled sets comprise a plurality of power outlets.

26. (Previously Presented) The device according to claim 22 further comprising:

for each independently controlled set of power outlets, an indicator light operatively connected to said set's corresponding controllable relay and corresponding control connection to indicate the sate of said independently controlled set of power outlets.

27. (Previously Presented) The device according to claim 22 wherein each of said relays is in a normally closed position such that power is supplied to each of said independently controlled sets of power outlets unless a control signal is applied to a set's corresponding control connection.

28. (Previously Presented) The device according to claim 22 wherein each of said relays is in a normally open position such that power is only supplied to each of said independently

controlled sets of power outlets when a control signal is applied to a set's corresponding control connection.

29. (Previously Presented) The device according to claim 22 further comprising, for each of said first network connection sockets, a second network socket allowing network communication signals to pass between said first and said second network sockets.

30. (Previously Presented) The device according to claim 22 wherein each of said network connection sockets has at least eight pin connections.

31. (Previously Presented) The device according to claim 30 wherein each of said relays is controlled by two relay controls and wherein one of said relay controls is operationally connected to a control connection of its corresponding network socket and the other of said relay controls is operationally connected to a ground signal connection of its corresponding network socket.

33. (Previously Presented) The device according to claim 22 further comprising:
at least three independently controlled sets of power outlets and at least three corresponding controllable relays, and at least three corresponding first network connection sockets.

34. (Previously Presented) The device according to claim 22 further comprising:
at least four independently controlled sets of power outlets and at least four corresponding controllable relays, and at least four corresponding first network connection sockets.

35. (Previously Presented) The device according to claim 22 further comprising:
at least eight independently controlled sets of power outlets and at least eight corresponding controllable relays, and at least eight corresponding first network connection sockets.

36. (Previously Presented) The device according to claim 34 further wherein the apparatus is housed in a housing having a top and bottom surface and wherein said top surface and said bottom surface are parallel planes between 1.5 and 2.0 inches apart and can be mounted in a computer device rack and only occupy one rack unit.

37. (Previously Presented) The device according to claim 35 further wherein the apparatus is housed in a housing having a top and bottom surface and wherein said top surface and said bottom surface are parallel planes between 1.5 and 2.0 inches apart and can be mounted in a computer device rack and only occupy one rack unit.